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Aberrant primaries and rectrices in Columbidae

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Normally, birds have a species-specific fixed number of primaries, secondaries and rectrices. However, occasionally they have been found to have abnormal numbers of these feathers (Stresemann & Stresemann 1966, Hanmer 1981, 1985, Somadikarta 1984, Melville 1985).

At Ludhiana (30°56′N, 70°52′E, c. 247 m a.s.l.) birds belonging to 5 species of Columbidae have been collected for gut content, morphometry and plumage studies, namely, Blue Rock Pigeon *Columba livia*, Ring Dove *Streptopelia decaocto*, Little Brown Dove *S. senegalensis*, Spotted Dove *S. chinensis* and Red Turtle Dove *S. tranquebarica*. Of these, out of a total of 206 Ring Doves and 127 Blue Rock Pigeons examined, one Ring Dove was found to be anisorectricial (0.49%), 2 had one primary missing (0.98%) and one Blue Rock Pigeon (0.79%) had an additional pair of primaries. All other specimens were normal, having 10 pairs of primaries, 12 pairs of secondaries and 6 pairs of rectrices.

The anisorectricial Ring Dove collected on 15 Sep 1985 had 13 rectrices, 6 on the left and 5 on the right side of the central pair, all of which remained evenly spaced across the pygostyle (Fig. 1) but were slightly more cramped on the side with the extra rectrix.

Of 2 Ring Doves, collected on 15 Jan 1986 and 17 Apr 1986, both had one primary missing on its left wing, ie. 9 primaries instead of 10 (Fig. 2). There was no evidence of trauma. The right wings had the normal 10

Figure 1

Figure 2

Figure 3

Figure 1. Tail of Ring Dove *Streptopelia decaocto* having 13 rectrices. An extra rectrix (No. 6) is present on the left side. (Saini & Toor).

Figure 2. Left wing of Ring Dove *Streptopelia decaocto* having 9 primaries. (Saini & Toor).

Figure 3. A Blue Rock Pigeon *Columba livia* having 11 pairs of primaries. P1 to P5 are new feathers, P6 is in moult and P7 to P11 are old feathers. (Saini & Toor).

primaries each. In both cases, it is not known which primary was missing since all the primaries were evenly spaced.

Cases of extra primaries are much less common than those of extra rectrices (Stresemann 1963, Snow 1967). A Blue Rock Pigeon collected on 10 Mar 1986 had an additional eleventh pair of primaries. The bird was in primary moult; the first 5 pairs of primaries had completed the moult, the 6th pair was moulting (moult score 4), while primaries 7–11 were old (Fig. 3).

Cases of anisorectricial birds have been reported in 45 species belonging to 16 families (Hanmer 1985) and a case of extra primary is reported in the Red-necked Stint *Calidris ruficollis* (Melville 1985). Among columbids anisorectricial birds have been reported in *Streptopelia capicola, S. senegala, S. decipiens, Oena capensis* and *Treron australis* (Hanmer 1985). However, there has been no previous record of aberrant rectrices and primaries in *Streptopelia decaocto* and *Columba livia*.

As suggested as long ago as 1896 by Newton, the death of a germ cell due to injury may be responsible for missing primaries, but the presence of extra rectrices cannot be thus explained. In the Blue Rock Pigeon the extra pair of primaries could be of phylogenetic origin, reflecting an evolutionary trend of reduction in the number of primaries in the past.

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A new locality for the Comb Duck *Sarkiniornis melanotos* from western Ecuador and notes on the distribution of the Horned Screamer *Anhima cornuta*

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On 5 Nov 1987 I visited Reserva Manglares-Churute (south side of the Gulf of Guayaquil, 2°30'S, 70°45'W), accompanied by the Reserve's